

Lista de Exercícios

1- Área do salão: 36 m^2

Área de 1 pega: $x^2 \rightarrow 400$ pegas

a) Área de cada pega em m^2

$$400x^2 = 36$$

$$x^2 = \frac{36}{400} \rightarrow \frac{9}{100}$$

$$\boxed{x^2 = 0,09 \text{ m}^2}$$

b) Perímetro, conto:

$$x^2 = \frac{9}{100}$$

$$x = \sqrt{\frac{9}{100}}$$

$$x = \frac{\sqrt{9}}{\sqrt{100}} \rightarrow \boxed{x = \frac{3}{10}}$$

$$P = 4x$$

$$P = 4 \cdot \frac{3}{10} \rightarrow \frac{12}{10}$$

$$\boxed{P = 1,2 \text{ m}}$$

2- Área $\boxed{x} = \text{Área } \boxed{y}$

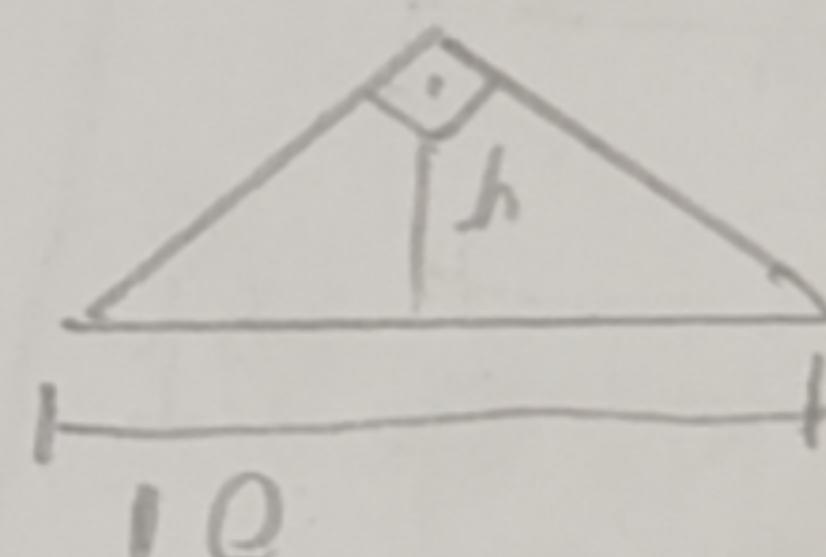
$$2x^2 = y^2$$

$$y^2 = \sqrt{2} \cdot x^2$$

$$\boxed{y = \sqrt{2} \cdot x}$$

R: Alternativa (D)

3-



Alternativa
D

$$A = \frac{b \cdot h}{2} \rightarrow 15 = \frac{10 \cdot h}{2}$$

$$15 = 5h \rightarrow h = \frac{15}{5} \rightarrow \boxed{h = 3}$$

4-

$$\text{Área } \boxed{x-3} = x(x-3)$$

$$\frac{x}{x-1}$$

$$\frac{1}{x-1}$$

$$\text{Ampliação: } \boxed{x+1} \quad \boxed{x-2} = x-2$$

$$\rightarrow \text{Área } \boxed{x-2} = (x \cdot (x-3)) + 16$$

$$(x+1) \cdot (x-2) = (x \cdot (x-3)) + 16$$

$$x^2 - 2x + x - 2 = x^2 - 3x + 16$$

$$x^2 - x^2 - x + 3x = 16 + 2$$

$$2x = 18$$

$$x = \frac{18}{2}$$

$$\boxed{x = 9 \text{ m}}$$

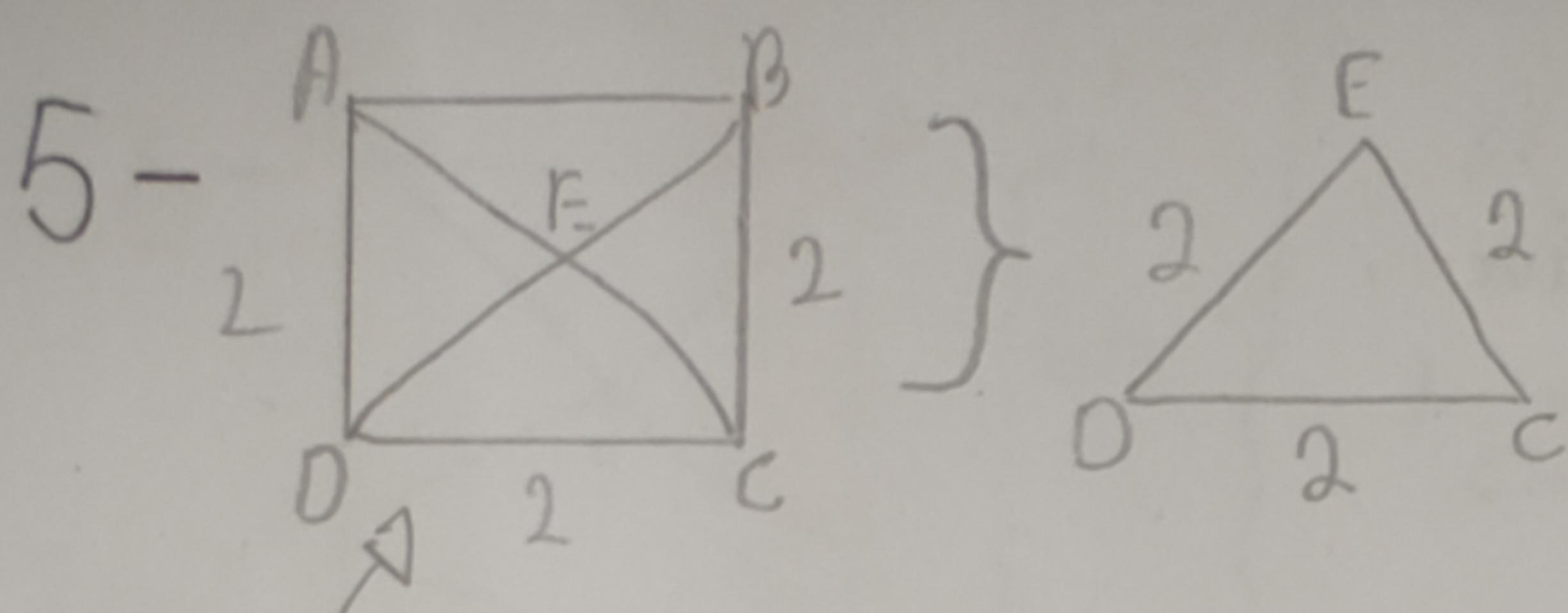
Área ampliada:

$$\boxed{(x-2) \cdot (x+1)}$$

$$(9-2) \cdot (9+1)$$

$$7 \cdot 10 \rightarrow$$

$$\boxed{70 \text{ m}^2}$$

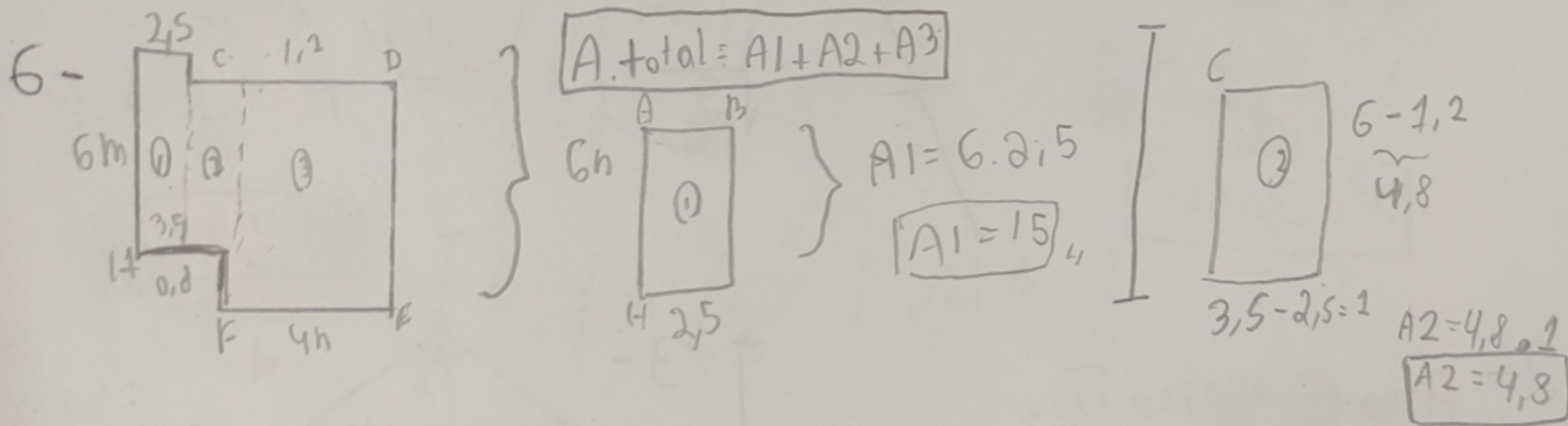


Nota. Os lados opostos ao lado igual a 2. Dado que \overline{DE} , \overline{CF} e \overline{CD} são lados opostos, eles medem 2.

$$\text{Área de } \triangle ODE \rightarrow AD = \frac{2^2 \sqrt{3}}{4} \rightarrow AD = \frac{4 \cdot \sqrt{3}}{4} \rightarrow A = \sqrt{3}$$

Área

Alternativa B

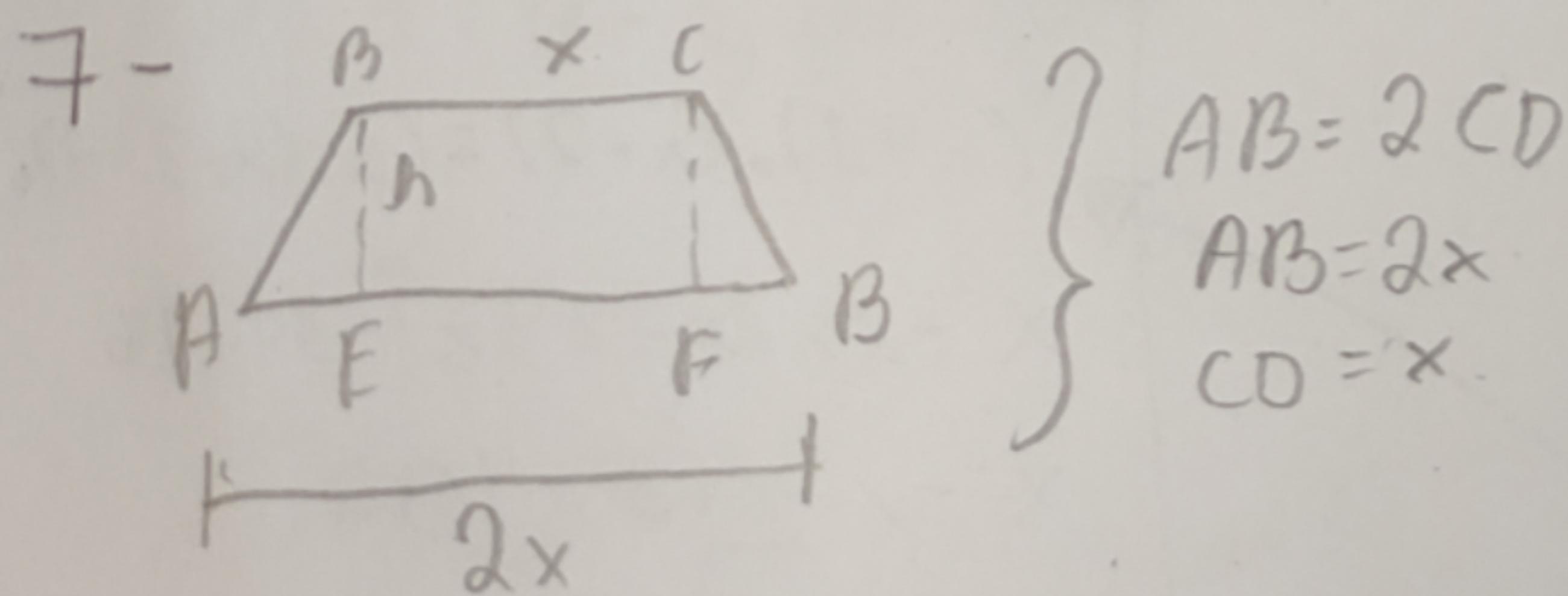


$A_{\text{total}} = A_1 + A_2 + A_3$

$A_{\text{total}} = 15 + 4,8 + 22,4$

$A_{\text{total}} = 42,2 \text{ m}^2$

Alternativa (E)



$$\left. \begin{array}{l} AB = 2CD \\ AB = 2x \\ CD = x \end{array} \right\}$$

$\text{Área} = 36 \text{ cm}^2$

$\frac{(B+b) \cdot h}{2} = 36 \text{ m}^2$

$\frac{(2x+x) \cdot h}{2} = 36 \text{ cm}^2$

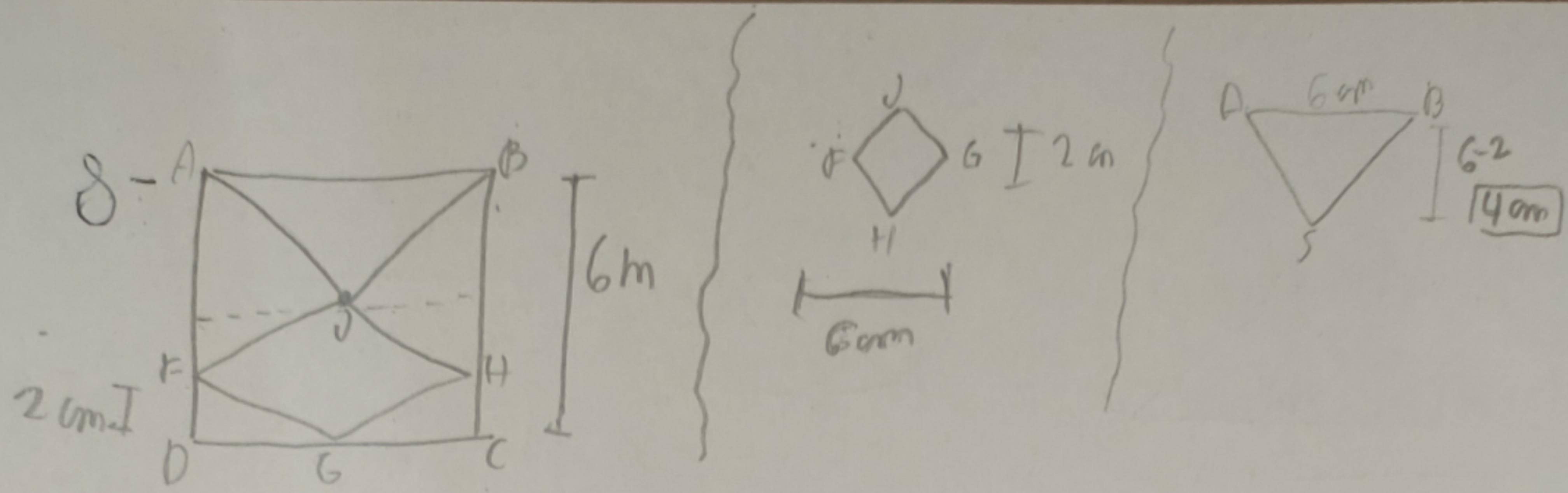
$\frac{3x \cdot h}{2} = 36 \text{ cm}^2$

$x \cdot h = \frac{36 \cdot 2}{3}$

$x \cdot h = 12 \cdot 2$

$x \cdot h = 24 \text{ cm}^2$

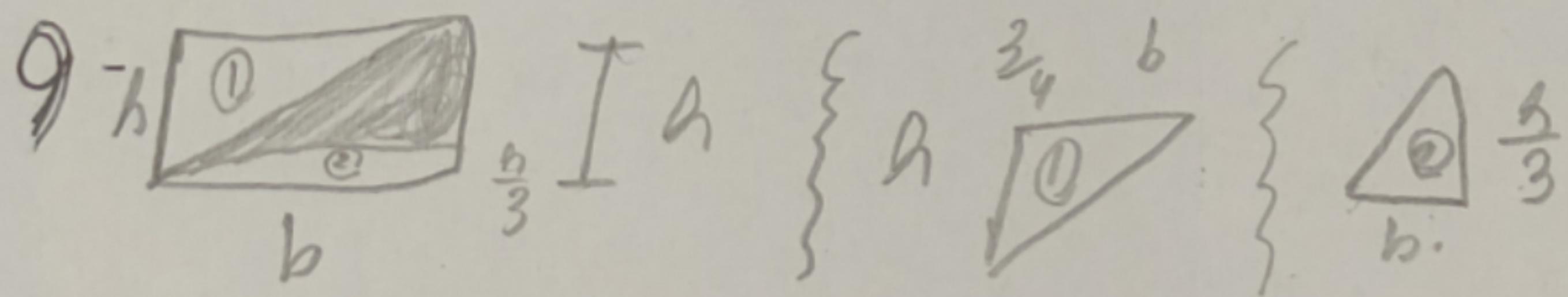
Alternativa (E)



Razões entre a área do losango PGITS e da triângulo ABS:

$$\frac{\text{Área Losango}}{\text{Área Triângulo}} \left\{ \begin{array}{l} \frac{6 \cdot 2}{2} \quad \% \quad \frac{\frac{3}{2} \cdot 4}{2} \\ \frac{6}{2} \cdot \frac{1}{2} \end{array} \right. \rightarrow \frac{\frac{2}{4}}{\frac{1}{2}} \quad \begin{array}{l} \div 2 \\ \div 2 \end{array}$$

① Alternative P



$$\text{Área } \square = 48 / b \cdot h = 48$$

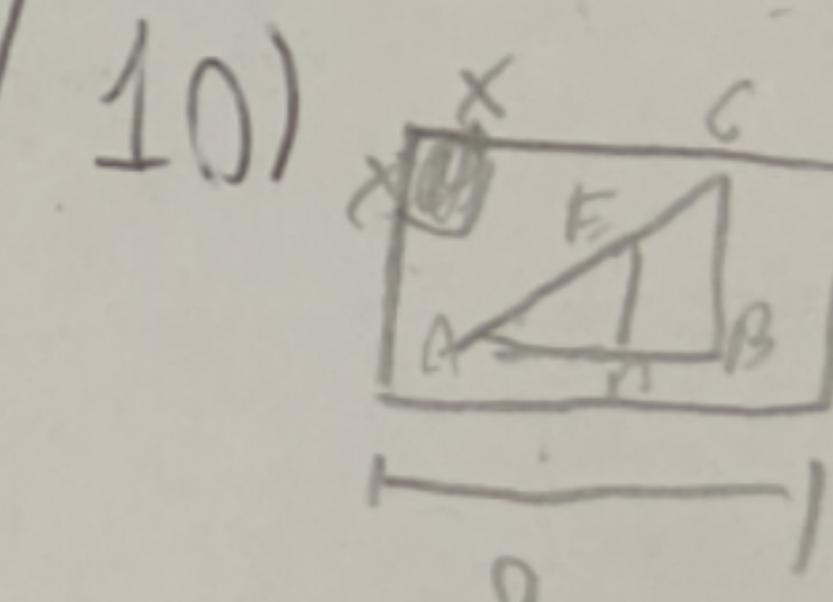
$$\text{Área Quadrilátero} = \text{Área } \square - \text{Área } \triangle - \text{Área } \triangle$$

$$\text{Área } Q = 48 - \frac{3}{4} b \cdot \frac{h}{2} - b \cdot \frac{h}{2} \cdot \frac{1}{2}$$

$$\text{Área } Q = 48 - \frac{3}{8} \cdot 48^2 - \frac{48}{6}$$

$$\text{Área } Q = 48 - 18 - 8$$

$$\text{Área } Q = 22 \quad \text{Alternative E}$$



$$\left(\frac{AD}{AB}\right)^2 = \frac{\text{Área } \triangle ADE}{\text{Área } \triangle ABC}$$

$$\left(\frac{AD}{8}\right)^2 = \frac{\frac{1}{2} \cdot AD \cdot BC}{\text{Área } \triangle ABC}$$

$$\frac{AD^2}{64} = \frac{1}{2}$$

$$2AD^2 = 64$$

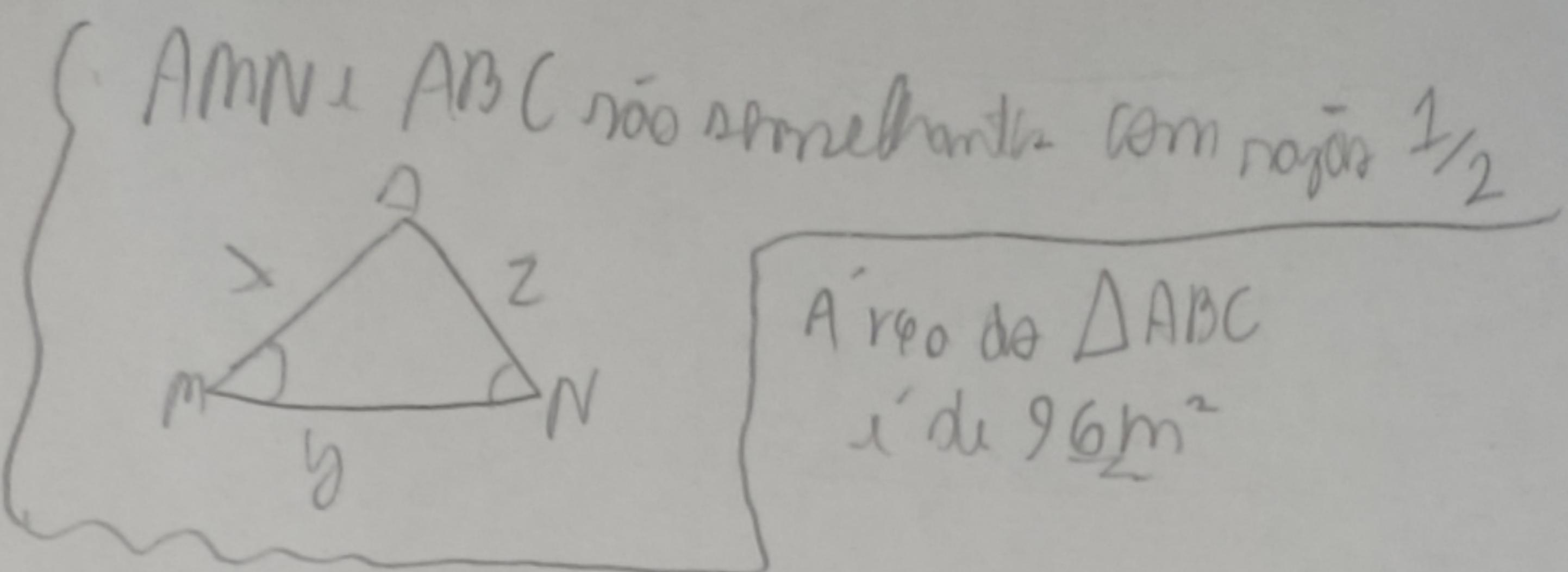
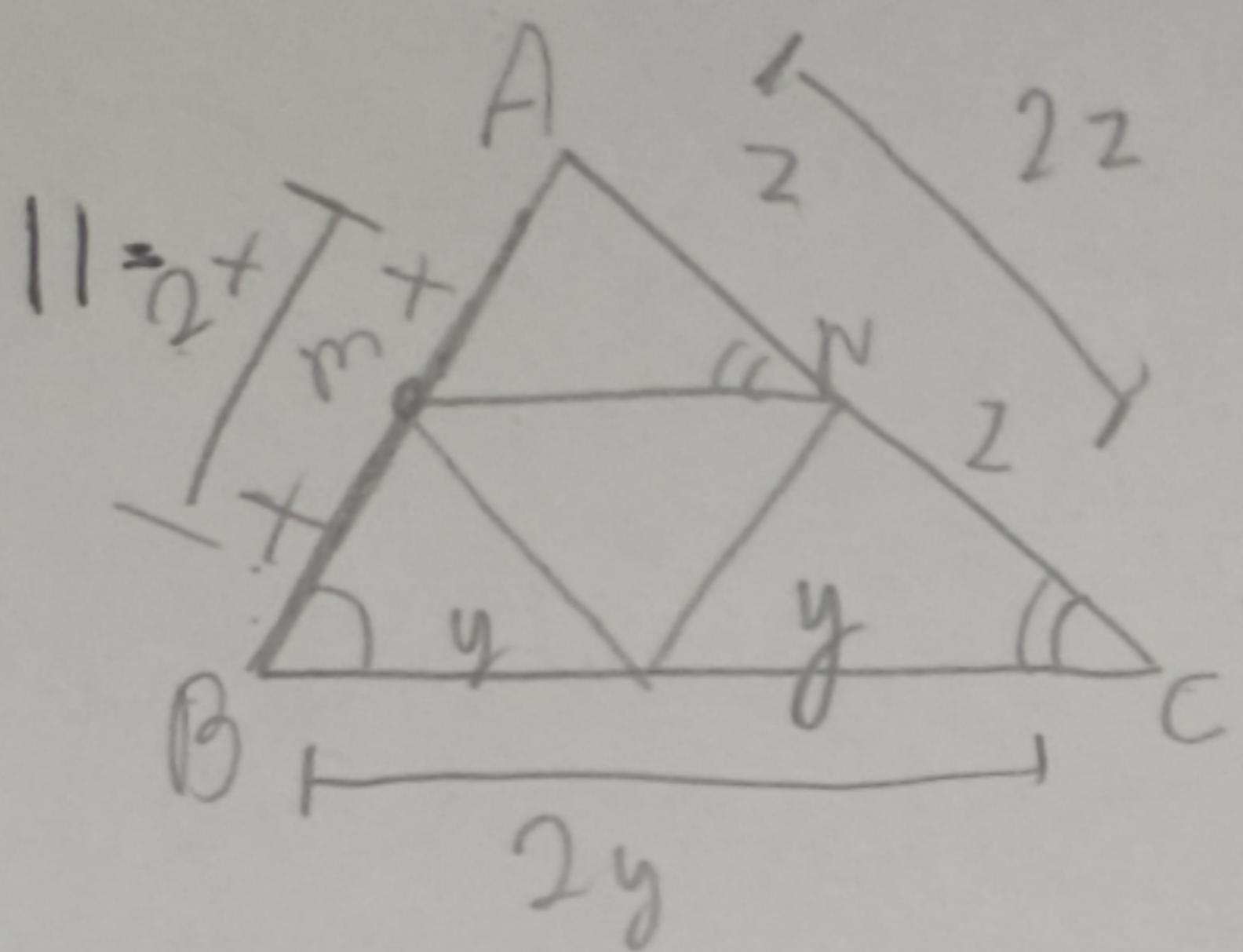
$$AD^2 = 64/2$$

$$AD^2 = 32$$

$$AD = \sqrt{2^2 \cdot 2^2 \cdot 2}$$

$$AD = 4\sqrt{2}$$

Alternative A



Área de $\triangle ABC$
é de 96 m^2

$$\frac{\text{Área } \triangle AMN}{\text{Área } \triangle ABC} = \left(\frac{1}{2}\right)^2$$

$$\text{Área } \triangle AMN = \frac{1}{4} \cdot \text{Área } \triangle ABC$$

$$\text{Área quadrilátero } (BMON) = 96 - 24$$

$$\Rightarrow \text{Área } \triangle AMN = 96/4$$

$$\text{Área } \triangle AMN = 24 \text{ m}^2$$

$$\boxed{\text{Área } Q_1 = 72 \text{ m}^2}$$